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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,578	11/06/2001	Yair Oren	20568-68741	4183

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EXAMINER

WANG, QUAN ZHEN

ART UNIT	PAPER NUMBER
2633	

2633

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

<b>Application No.</b> 09/913,578	<b>Applicant(s)</b> OREN ET AL.	
<b>Examiner</b> Quan-Zhen Wang	<b>Art Unit</b> 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 30 June 2005.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-16 and 21-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-16 and 21-24 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_

### DETAILED ACTION

1. In view of the amendment filed on 30 June 2005, the Final Office Action mailed on 5 May 2005 has been withdrawn. A new Final Office Action is as follows.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16, 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kai et al. (U.S. Patent US 6,278,536 B1) in view of Darcie (U.S. Patent US 4,701,904).

Regarding claims 1 and 9, Kai teaches a node (fig. 11) for a fiber optic communication network (figs. 10, 12), the node comprising a first combination of devices (fig. 11, a monitor signal receiving unit 103) to detect (convert from optical signal to electrical signal) and process first information modulated on a first optical signal at first frequency (SV signal; column 32, lines 5-16 and column 19, lines 53-65); a second combination of devices (fig. 11, a monitor signal sending unit 107) to send a second information modulated on a second optical signal at first frequency (SV signal; column 20, lines 49-63); an adding port (fig. 11, the Add port connected to insertion optical switch 47-1) for adding a third optical signal at second frequency ( $\lambda_1$ ); a sixth

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optical switch 47-1) for adding a third optical signal at second frequency ( $\lambda_1$ ); a sixth device (fig. 11, element 106) for multiplexing the second and third optical signals and placing the multiplexed second and third optical signals on the network (fig. 11, output 1B); and a control device (combination of the monitor signal receiving unit 103 and the monitor signal sending unit 107) for processing control information included within the first information (column 32, lines 5-16, and column 19, lines 57-65) and providing within the second information control information adapted for use by another node (column 32, lines 5-16, and column 20, lines 49-55). The system of Kai differs from the claimed invention in that Kai does not specifically teach that the first combination of devices comprising a first device for converting a first optical signal at a first frequency carried by the network into a first electrical signal, a second device for demodulating from the first electrical signal first information modulated on the first optical signal; the second combination of devices comprising a third device for modulating on a second electrical signal second information, a fourth device for converting the second information modulated on the second electrical signal into a second optical signal at the first frequency; and a fifth device for providing a third optical signal at a second frequency, the third optical signal having third information modulated on it. However, it is well known in the art that an optical receiver comprises a first device for converting an optical signal carried by the network into an electrical signal, a second device for demodulating from the electrical signal information modulated on the optical signal; an optical transmitter comprises a third device for modulating on an electrical signal information, a fourth device for converting the information modulated electrical signal

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into an optical signal. For example, Darcie discloses that that an optical receiver (fig. 6) comprises a first device (fig 6, photodetector) for converting an optical signal carried by the network into an electrical signal, a second device (fig. 6, Demod 53) for demodulating from the electrical signal information modulated on the optical signal (fig. 6, DATA OUT); an optical transmitter (fig. 3) comprises a third device (fig. 3, modulator 20) for modulating on an electrical signal information to an electrical signal, a fourth (fig. 3, optical source 21) device for converting the information modulated electrical signal into an optical signal (fig. 3, optical output signal). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate an optical receiver, such as the one disclosed by Darcie, into the first combination of devices (a monitor signal receiving unit 103) of Kai, and an optical transmitter, such as the one disclosed by Darcie, into the second combination of devices (a monitor signal sending unit 107) of Kai; and incorporate another optical transmitter of Darcie to the adding port connected to insertion switch 47-1 in the system of Kai in order to detect the SV signal from the network, send SV signal to next node, and add information channel at  $\lambda_1$  for the system of Kai.

Regarding claims 2-5, 10-11, Kai further teaches to drop and add optical signals at more different wavelengths ( $\lambda_2$ - $\lambda_8$ ). The system of Kai differs from the claimed invention in that Kai does not specifically teach the specific optical-to-electrical conversion devices, signal demodulation device for optical receivers and signal modulation devices and electrical-to-optical conversion devices for optical transmitters. However, the specific configurations of optical receivers and transmitters are well known

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in the art. For example, Darcie discloses exemplary optical receiver (fig. 6) and optical transmitter (fig. 3). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the optical receivers and transmitters disclosed by Darcie into the system of Kai in order to extract information from a dropping optical signal and provide information to an adding optical signal at a node in the network.

Regarding claims 6, and 21-24, Kai further teaches that a fiber optic network (fig. 12) including the node (fig. 12, node 62) of claim 1 and further including a second node (fig. 12, node 62A), the second node including a first device for converting a first optical signal at a first frequency (SV signal) carried by the network into a first electrical signal, the second node further including a second device for demodulating first information from the first electrical signal modulated on the first optical signal, the second node further including a third device for modulating second information on a second electrical signal, and the second node further including a fourth device for converting the second information modulated on the second electrical signal into a second optical signal at the first frequency (column 32, lines 54-61).

Claims 7-8 are rejected for the same reason set forth for claims 2-5.

Regarding claim 12, Kai further teaches a network includes a closed loop optical fiber, one of the first-mentioned nodes and at least one of the second nodes coupled to the closed loop optical fiber (fig. 12).

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Regarding claims 13, Kai further teaches a network includes two closed loop optical fibers for carrying the first optical signal in opposite directions, each node being coupled to both optical fibers (figs. 10-12).

Regarding claim 14, Kai further teaches that the two closed loop optical fiber also carry the third optical signal ( $\lambda_1$ ) in the two opposite directions (figs. 10-12).

Regarding claims 15-16, Kai further teaches that the fiber optic network includes a closed loop optical fiber, one of the first-mentioned nodes and at least one of the second nodes coupled to the closed optical fiber (figs. 10-12).

### ***Response to Amendment***

1. Applicant's arguments with respect to claims 1 and 9 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sutter et al. (U.S. Patent US 5,760,934) discloses a ring network for transmitting wavelength-multiplexed information in two-optical fiber ring network. Arecco et al (U.S. Patent US 5,903,371) disclose a transparent optical self-healing-ring communication network comprising add/drop nodes.
3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qzw  
07/18/2005



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